

19

Aqueous 40% methylamine solution (1300 ml) was placed in a pressure reactor, cooled to 0-5° C., and the product of Example 5 (ethyl (2E)-3-({9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-2-[4-(ethoxycarbonyl)pyrazolyl]purin-6-yl}amino)-2-formylprop-2-enoate (100 g) added. The mixture was stirred at 0-5° C. for at least 8 hours, monitoring the reaction for completion. When complete, the mixture was warmed, maintaining the temperature between 50 and 60° C. for 1 hour, and then cooled to less than 30° C. over a period of 1 hour. When the temperature was below 30° C., the mixture was degassed using a pressure of 100-150 mm Hg, allowing the temperature to decrease to 0-5° C. The mixture was stirred at 0-5° C. for at least 1 hour, maintaining the pressure at 100-150 mm Hg. The vacuum was then discontinued and replaced by nitrogen, maintaining the temperature at 0-5° C. for not less than 30 minutes. The solid product was then filtered off, washed with water (3×500 ml), then with absolute ethanol (625 ml). The product was dried under vacuum, not allowing the temperature to exceed 40° C., to provide (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-aminopurin-2-yl}pyrazol-4-yl)-N-methylcarboxamide as its monohydrate.

¹H and ¹³C NMR spectra were obtained in the following manner. Two samples of the material obtained above were weighed out and dissolved in d₆-DMSO—5.3 mg was used for the ¹H spectra, and 20.8 mg was used for ¹³C spectra. All spectra were acquired at ambient temperature on a JEOL Eclipse* 400 spectrometer operating at 400 MHz for ¹H and 100 MHz for ¹³C.

Label	¹³ C shift(ppm)	¹ H shift(ppm)	Multiplicity, splitting(Hz)
2	150.5 or 150.3	—	
4	156.4	—	
4a	117.9	—	
6	140.0	8.41	s
7a	150.5 or 150.3	—	

20

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Label	¹³ C shift(ppm)	¹ H shift(ppm)	Multiplicity, splitting(Hz)
1'	86.9	5.94	D, 6.2
2'	73.7	4.62	m
2'-OH	—	5.50	D, 6.2
3'	70.5	4.17	m
3'-OH	—	5.23	D, 4.7
4'	85.7	3.96	m
5'	61.5	3.67, 3.57	m
5'-OH	—	5.02	D, 5.7
A	140.9	8.07	D, 0.8
B	120.2	—	
C	129.6	8.95	D, 0.8
D	161.7	—	
E	25.6	2.76	D, 4.6
NH ₂	—	7.77	br s
NH	—	8.35	Q, 4.6

An elemental analysis gave the following results: C, 43.96%; H, 4.94%; N, 27.94. Theoretical: C, 44.12%; H, 4.94%; N, 27.44%; O, 27.09. The analysis corresponds within experimental error limits to the monohydrate.

We claim:

1. A method of preparing a pharmaceutical composition comprising combining a monohydrate of the compound (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-aminopurin-2-yl}pyrazol-4-yl)-N-methylcarboxamide with at least one pharmaceutically acceptable carrier.

2. The method of claim 1, wherein the pharmaceutically acceptable carrier comprises a buffered aqueous solution.

3. The method of claim 2, wherein the monohydrate is a crystalline monohydrate that is substantially free of 2-hydrozinoadenosine.

4. The method of claim 3, wherein the monohydrate is substantially free of other forms of the compound.

5. The method of claim 4, wherein the monohydrate has a purity of at least about 99.6%.

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